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Climate Change Adaptation

Challenges in Institutionalization and Financing

Policy Paper 35

Climate change is one of the key challenges to mankind in the 21st century. Even under drastic cuts in global greenhouse gas emissions, climate change adaptation will be necessary for decades to come. Although varying over time and space, the impacts of climate change are likely to exacerbate food insecurity, increase the number of people affected by weather-related disasters, trigger economic and biodiversity loss, and cause local and regional political instability. Developing countries will be disproportionally affected due to their geographic locations and high vulnerability. Adaptation to climate change is highly necessary but the capacity to adapt in many developing countries is severely constrained by a lack of institutions, infrastructure, knowledge and financial resources. Therefore, the international community has a distinct role to support adaptation in developing countries. Following the 'polluter pays principle', the large share of historic greenhouse gas emissions of developed countries makes them responsible for financing adaptation. Climate change adaptation is estimated to cost tens of billions US Dollar per annum in the coming decades. Without proper institutionalisation of adaptation, this money cannot be mobilised, administrated and disbursed in an adequate, transparent and predictable manner.

This SEF Policy Paper takes stock of the current status of institutionalization and financing of adaptation. In section 1 we show that adaptation has been institutionalised internationally, and point at the need to equip the national and local levels to take on the adaptation challenge. In section 2 we elaborate on the nexus between Official Development Aid (ODA) and climate finance and show the need for a straightforward and broadly accepted definition of climate finance and criteria for reporting on it. Section 3 provides an overview of current financial resources for adaptation and shows that these still fall short compared to the amount needed in developing countries. Finally, in section 4 we propose ways to capitalize on current opportunities to improve the institutionalisation and financing of climate change adaptation.

I. Institutionalizing adaptation to climate change

Adaptation is the adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, to moderate harm or capitalize on opportunities. So institutionalisation of adaptation is the process of identifying the role of these 'adjustments' and establishing them as a major response to climate change by putting in place agreements and mechanisms to implement adaptation. The institutions involved in this international process are governmental and non-governmental organizations, regimes, and implicit rules (such as reciprocity). The regime most important in this paper is the United Nations Framework Convention on Climate Change (UNFCCC). Eighteen years after its establishment in 1992, this incremental process of institutionalising adaptation culminated in the 2010 Cancún Adaptation Framework (CAF). In the CAF the Parties affirmed that adaptation should receive the same priority as mitigation.

Adaptation is mentioned explicitly in the UNFCCC convention text of 1992. When it entered into force two years later, its signatory countries (the Parties) committed to establish measures to facilitate adaptation to climate change, to cooperate in adaptation measures, and that developed country Parties will assist developing country Parties in meeting the costs of adaptation. Over the years, the Conference of the Parties (COP; the highest authority of the Convention), has made several decisions on adaptation that reiterated the convention's commitments on support and funding for adaptation including impact and vulnerability assessments, awareness creation, capacity building, knowledge exchange, and technology transfer (see Figure 1). Over the years a variety of working programmes, expert groups and funds on adaptation has been established. Facing the risks of fragmentation and a lack of transparency in this incremental process, the developing countries' demanded more coherence in adaptation action under the UNFCCC, which resulted in the development of the Adaptation Committee The COP has thus driven the institutionalisation of adaptation which has resulted in a complex and expanding constellation of institutions and actors as illustrated in figure 1 and 2.

This constellation has been heavily influenced by different networks and coalitions of parties). The division into Annex 1 and non-Annex 1 countries and the associated obligations has so far driven negotiations and decisions within the UNFCCC. The Annex I Parties (mostly industrialised countries) and the Annex II Parties (mostly developing countries) further group themselves into geographic regions or according to major interests in the UNFCCC negotiations. Prominent among the UNFCCC recognised groups, for instance, is the Group of 'G-77 plus China', which comprises 132 developing country members. Although this group has shaped decisions and actions, the differing interests of this diverse group makes individual developing countries or regional

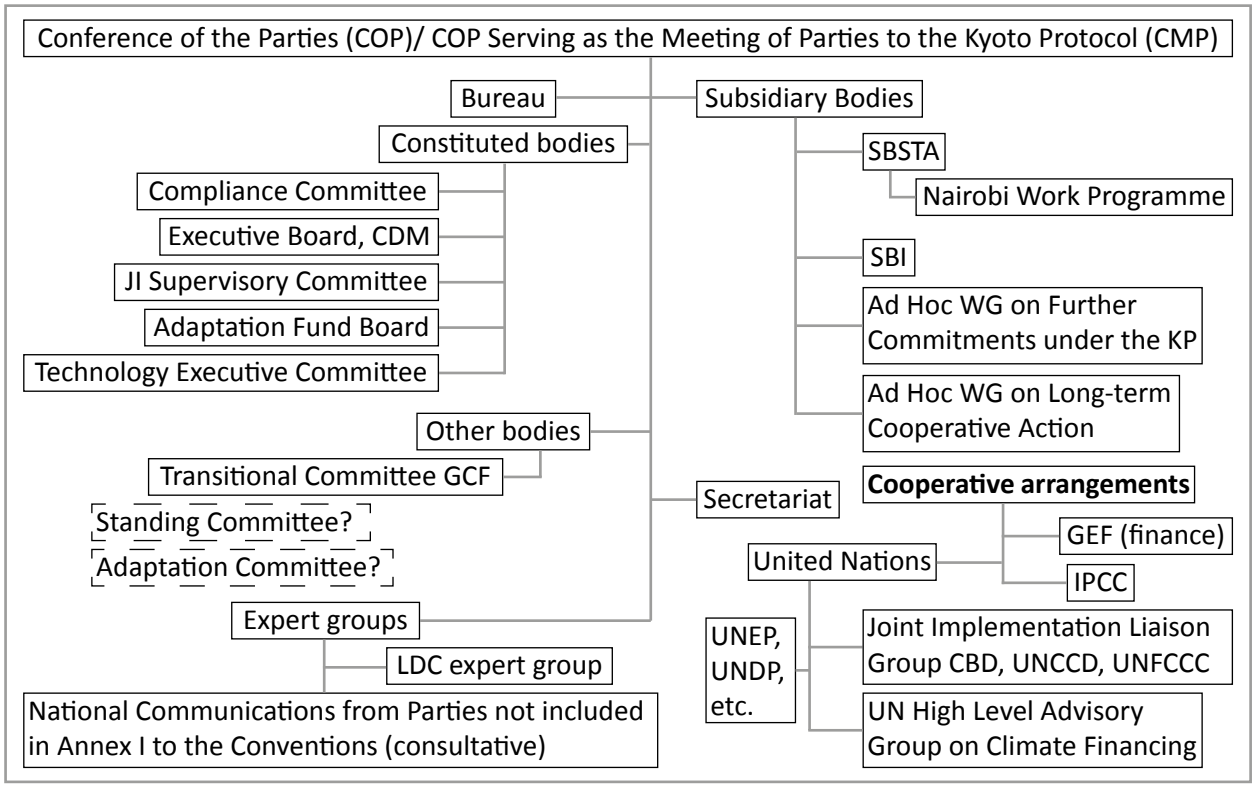

Figure 1. Institutional set up of the UNFCCC

CDM= Clean Development Mechanism; **GCF**= Green Climate Fund; **GEF**= The Global Environment Facility; **IPCC**= Intergovernmental Panel on Climate Change; **JI**= Joint Implementation; **KP**= Kyoto Protocol; **LDC**= Least Developed Countries; **SBI**= Subsidiary Body for Implementation; **SBSTA**= Subsidiary Body for Scientific and Technological Advice; **UNCCD**= United Nations Convention to Combat Desertification; **UNDP**= United Nations Development Programme; **UNEP**= United Nations Environment Programme; **WG**= working group
Source: based on UNFCCC Bodies. http://unfccc.int/bodies/items/6241.php.

groups to also intervene in debates. Such groups include the 'Africa Group' whose common interest is to improve burden sharing in adaptation financing; the 'Alliance of Small Island States' (AOSIS) that have a common concern of reducing vulnerability to sea-level rise; and the Least Developed Countries (LDC) group that aims to increase support for improving its members' adaptive capacity. The European Union (EU) with its 27 members is another major regional group that often has a common negotiating position among its members.

Actions at the international level have triggered various regional and national strategies and plans to respond to climate change. The recently established Africa Climate Policy Centre is a good regional example. At national levels, many developing and developed countries have formulated national climate change response strategies (e.g. Kenya, Nigeria, Switzerland, and Germany). As a result of the UNFCCC process, most LDCs have already developed their National Adaptation Programmes of Action (NAPA). The NAPAs focus on direct needs for adaptation and priority projects were formulated. Based on the Cancun agreements, the LDCs will soon develop longer-term adaptation plans in their National Adaptation Plans (NAP). However, adaptation strategies are in many cases still limited to national levels and to the national authorities representing governments at the UNFCCC. There is thus a need for both a horizontal (link to other government authorities at national levels) and vertical (international, national, sub-national and local levels) mainstreaming of climate change adaptation.

Besides inter-governmental and governmental action on climate change, NGOs and other non-state actors are also increasingly active in institutionalising climate change adaptation,often at a national level, but also at an international level. The Climate Action Network (CAN), for instance, is a global network representing 700 NGOs in more than 90 countries. They contribute to the institutionalisation of adaptation inter alia through awareness campaigns, capacity building, advocacy, observing climate negotiations, and playing a watch-dog role on climate financing.

Institutionalising adaptation has thus been a multi-level process (at international, regional and national levels) involving multilateral organisations and bilateral donors and extending beyond the UNFCCC regime towards de-

velopment cooperation. By establishing the Joint Liaison Group of the Rio Conventions (Figure 1) to ensure coherence between the conventions, adaptation became further institutionalised in other multi-lateral environmental frameworks. Multilateral organisations such as the World Bankalso influence the adaptation discourse and action through targeted funds and initiatives. In many cases, UN-Programmes (Figure 1) such as the United Nations Environment Programme (UNEP) and the United Nations Development Programme (UNDP) have been instrumental in capacity building in developing countries and in guiding the LDCs in the National Adaptation Programmes of Action (NAPA) process.

To conclude, climate change adaptation has been increasingly institutionalised internationally. National institutionalisation of adaptation varies from country to country, but is increasing rapidly, partly because of the international push (e.g. NAPAs and NAPs). However, at the local level, awareness of climate change is often low and local knowledge is generally not adequately harnessed by public institutions. Hence further action is required to institutionalize adaptation both at the national and local levels. In the overall process of institutionalisation some hot topics remain, two of which are subsequently discussed in this paper: 1) the clarification of the distinction between adaptation and development, and 2) how to finance adaptation in developing countries.

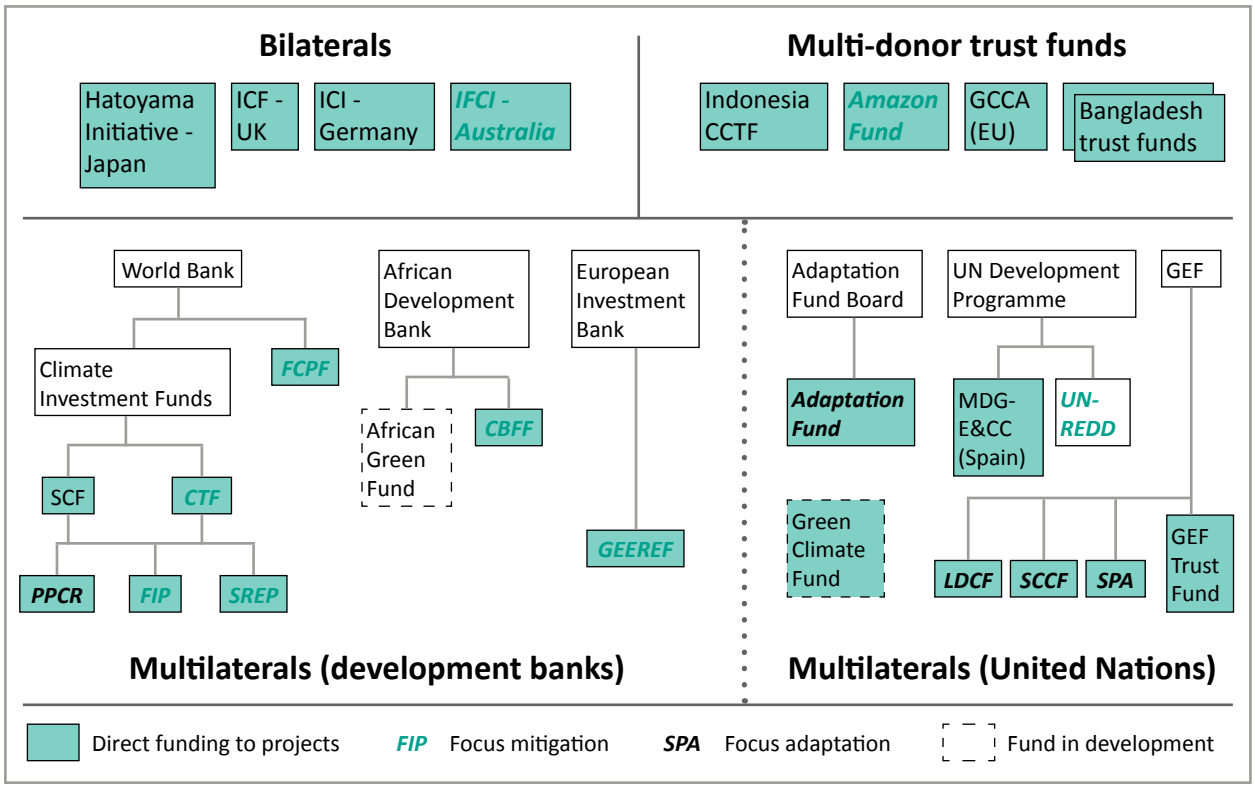

Figure 2. Bilateral funds, multilateral funds and multi-donor trust funds on climate change finance

CBFF= Congo Basin Forest Fund; **CCTF**= Climate Change Trust Fund; **CTF**= Clean Technology Fund; **FCPF**= Forst Carbon Partnership Facility; **FIP**= Forest Investment Programme; **GCCA**= Global Climate Change Alliance; **GEF**= Global Environment Facility; **GEEREF**= Global Energy Efficiency and Renewable Energy Fund; **ICF**= International Climate Fund; **ICI**= International Climate Initiative; **IFCI**= International Forest Carbon Initiative; **LDCF**= Least Developed Country Fund; **MDG-E&CC**= Millenium Development Goals, Environment and Climate Change thematic window; **MDTF**= Multi-Donor Trust Fund; **PPCR**= Pilot Programme for Climate Resilience; **SCCF**= Special Climate Change Fund; **SCF**= Strategic Climate Fund; **SPA**= Strategic Priority on Adaptation; **SREP**= Scaling-up Renewable Energy Programme for low income countries; **UN-REDD**= United Nations collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries. Source: based on Caravani, A., Bird, N. & Schalatek, L. (2010). Climate Finance Fundamentals. Brief 2, November 2010. Heinrich Böll Stiftung and Overseas Development Institute.

II. Adaptation and development

There is no operational definition of adaptation that can be used to specify adaptive measures and then estimate the associated capital and operation costs . Development is often considered as adaptation, and vice versa. For instance, investment in adaptation strategies such as efficient irrigation systems and flood defence lowers the impact of natural disasters, but at the same time drives economic growth by strengthening infrastructure and spurring the development of new technologies. This feeds directly into the discussion to what extent climate finance can be accounted as Official Development Assistance (ODA). The Copenhagen Accord mentions that climate finance shall be 'new and additional', but this concept has no operational definition yet and is interpreted in different ways. On the one hand, many donor countries seek to link and partly integrate adaptation finance and ODA. For example, much of the Dutch, Danish and Japanese contributions to Fast Start Finance (cf. page no. 6) already existed and was simply relabelled. Many developed countries also consider climate finance as a part of their ODA contribution to support the Millenium Development Goals related to environment. The Netherlands is an interesting case as it made a complete change-over recently. Their new government changed their vision from climate finance that should be over and above the 0.7% GNI commitment, to full inclusion of climate finance within the 0,7% commitment. On the other hand, recipient countries argue that funding for adaptation should cover the additional costs of climate change and be separate from existing ODA commitments. This discussion leaves the puzzled development community in a catch 22. On the one hand the development community is forced to take into account climate change as it could set back all achievements towards reaching the Millennium Development Goals, but on the other hand there is the fear that the attention given towards climate change results in more climate finance at the expense of ODA. Development NGOs thus generally insists on a clear distinction between climate finance and ODA, whereby climate finance is over and above ODA.

In practice, all funds can be classified both as ODA and as climate finance except for the Adaptation Fund which is classified as climate finance. To work towards a clarification between ODA and climate finance, the EU requested all its member states to declare their working definitions of new and additional finance. Germany's definition of additional is twofold. All climate finance should be additional to the reference (2009) levels of ODA expenditure on climate; and all funding by new financing sources (e.g. the auctioning of emission allowance units) is also additional. To distinguish ODA and climate finance, and following the example of earlier Rio markers to track development aid, the Development Assistance Committee of the Organisation for Economic Co-operation and Development (OECD DAC) in 2009 developed the Rio markers for climate change adaptation. These adaptation markers differentiate between adaptation as a principle reason for an activity (without this reason the activity would not have been funded) and adaptation being a 'significant' objective. When these two are summed up they proved an estimate or upper bound of climate change adaptation finance. Any other activities might be screened against climate adaptation goals, but are not targeted at adaptation specifically. Many donor countries have already adopted these markers. But even if this ambiguous definition proves to be able to distinguish between ODA and climate finance, it will take a few years before the extent to which adaptation funding is 'new and additional' and its effects on ODA can be assessed.

In addition to financing adaptation, development cooperation is also increasingly involved in institutionalising adaptation through efforts to integrate adaptation into national development plans and development projects in developing countries. The German Organization for International Cooperation (GIZ), for instance, now uses climate proofing tools to identify the risks that climate change poses to its development interventions and how to reduce such risks. Development NGOs and other non-state actors have also raised the profile of adaptation through advocacy, policy advice and implementation of concrete adaptation actions on all levels from local to global. The development cooperation brings along important lessons for institutionalization and financing of climate change adaptation, especially when it comes to key concepts such as ownership, transparency and predictability.

Recommendations

Whilst development cooperation and climate finance communities share their goal of climate compatible social, environmental and economic development, the current finance debate divides them. We recommend the improvement of straightforward definitions that are able to label projects as climate finance and distinguish them from ODA. This will only work out if the definitions are broadly accepted by donors and recipient countries alike. The OECD DAC markers could be a starting point, but its procedure of self-reporting by donors needs to be addressed in

order to improve transparency. A broadly accepted and straightforward definition of climate finance is also very important to determine future amounts of climate finance given that it is foreseen to come from a wide variety of sources including public, private and innovative mechanisms. Furthermore, it increases transparency and might also increase developing countries' the accessibility to funding.

III. Current status of financing climate change adaptation

Both developed and developing countries generally argue for equity and justice on burden sharing of the climate change impacts caused by greenhouse gas emissions of developed countries. Calculations of the cost of global adaptation to climate change provide nothing more than estimates and vary to a large extent. Studies of the World Bank, Oxfam, the UNFCCC and others do however show that climate change adaptation alone will cost tens of billions of US dollars annually in developing countries. In recent years, developed countries have stepped up their activities and pledged almost USD 32 billion of climate finance for both mitigation and adaptation, both within and outside UNFCCC. But currently only about 20% is spent on adaptation – a division possibly fuelled by developed countries' higher interests in mitigation. In general, developed countries seem incapable to mobilize tens of billions annually in a predictable, constant and transparent manner. And they stand alone: so far the lion's share of pledged finance comes from the traditional donor countries of the OECD. For example, a modest donor like Ireland has pledged twice the amount of the BRICS (Brazil, Russia, India, China and South Africa) altogether. Given the rapidly increasing contributions to global greenhouse gas emissions of the BRICS, it would be in line with the polluter pays principle to demand higher contributions to climate finance from them.

Climate finance has been disbursed through more than 20 bilateral and multilateral funds. Some of them are embedded under the UNFCCC, others are not. (See Figure 2). The largest disbursements come from the Global Environment Facility (GEF) trust funds (USD 834 million) and Germany's International Climate Initiative (USD 574 million), but these funds have a limited role for adaptation (85 and 18 million, respectively). The largest disbursements on adaptation all come from multilateral funds see figure 2 and 3). The biggest fund is the Least Developed Countries Fund (LDCF; USD 104 million) which aims to

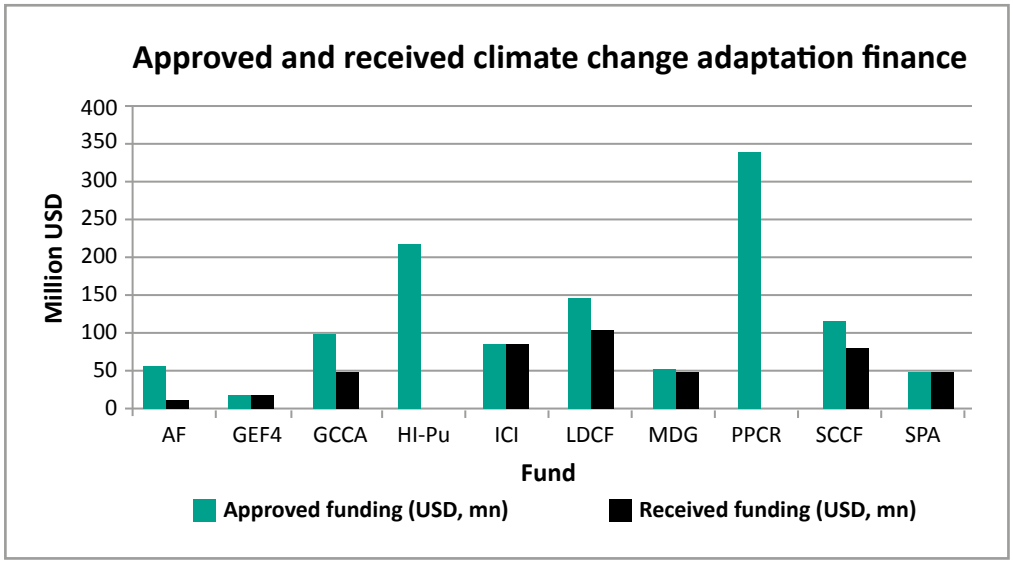

Figure 3: Approved and received climate change adaptation finance per fund

AF= Adaptation Fund (multilateral); **GEF4**= GEF Trust Fund – Climate Change focal area (multilateral, closed); **GCCA**= Global Climate Change Alliance (EU); **HI-Pu**= Hatoyama Initiative Public sources (Japan); **ICI**= International Climate Initiative (Germany); **LDCF=** Least Developed Country Fund (multilateral); **MDG**= MDG Achievement Fund – environment and climate change thematic window (multilateral, but Spain was only donor); **PPCR**= Pilot Program on Climate Resilience; **SCCF**= Special Climate Change Fund (multilateral); **SPA**= Strategic Priority on Adaptation (multilateral, closed). Source: www.climatefundsupdate.org, data from October 2011.

support LDCs in preparing and implementing National Adaptation Programmes of Action (NAPAs). Other major contributions to adaptation come from the Special Climate Change Fund (SCCF; USD 80 million) and came from the Strategic Priority on Adaptation (SPA; USD 49 million)(data from www.climatefundsupdate.org). The SCCF aims to implement long-term adaptation measures that increase the resilience of national development sectors to the impacts of climate change. The already completed SPA pilot programme of the GEF aimed to address local adaptation needs and to generate global environmental benefits in some of the GEF's focal areas: biodiversity, climate change, international waters, land degradation, and persistent organic pollutants. Finally, the Adaptation Fund is a financial instrument under the UNFCCC and its Kyoto Protocol that finances adaptation projects and programs in developing countries through grants. Unique in this fund is that it is largely financed through a 2% levy on the Certified Emission Reduction units issued under the Clean Development Mechanism of the Kyoto Protocol. Up to date the voluntary pledges by donor countries only make up 35% of the size of the fund. It only became operational in 2009 and so far disbursed USD 22 million.

The large number of funds makes guidance unclear, transaction costs high and accessibility low. On the positive side, the variety of funds could ease the mobilization of funds as each and every donor will be able find a fund that suits its aims or perception of climate finance. However, the reality is that the disbursements of the funds are still inadequate to meet adaptation needs in developing countries.Therefore, in the Copenhagen and Cancun climate summits the Annex I countries pledged to mobilize USD 100 billion per annum for developing countries from 2020 onwards. The 'Green Climate Fund' will be established as an operating entity of the financial mechanism to channel most of this money to support mitigation, adaptation, capacity-building, technology development and transfer in developing countries, and REDD+ (Reducing Emissions from Deforestation and forest Degradation) . For the period 2010-2012, USD 30 billion new and additional Fast Start Finance (FSF) was committed. This money is being mobilized voluntarily and not based on a distribution key. How climate finance will be increased by tenfold in the coming eight years, or what will happen in between the two finance commitment periods (2013-2019), remains unclear. The current economic and financial crises complicate these issues even more.

Fast Start Finance

Up to date almost USD 32 billion of climate finance has been pledged. Even though this does include some funding from before the Fast Start Finance period commenced in 2010, it is 7% more than was committed in Copenhagen and Cancun and a positive sign of developed country commitment. It is unclear how much of the pledged and already deposited money will be allocated to adaptation (See Figure 4) and how much will go the most vulnerable countries. But in concordance with the Copenhagen Accord the current disbursement on climate change adaptation largely went to the most vulnerable countries (LDCs, Africa and Small Island Developing States (SIDS)). The LDCs have received 40% of the current adaptation finance, Africa 34% and the SIDS 15%. This does however involve significant double counting: São Tomé and Príncipe for instance is among both the LDCs and SIDS and is located in Africa. Around 47% of the received finance went to global and regional projects and to countries not falling under any of these categories (the Philippines, Colombia and China in particular). Of the adaptation finance that is in the pipeline ('approved funding') only 45% goes to these global and regional projects and to the countries not falling under the LDCs, Africa or SIDS.

However, vulnerable developing countries still have reasons to be critical. First of all, current levels of climate finance are inadequate. Less than a third of the pledged finance has been approved, and only eight per cent of the pledged funds have been received. Most pledges come from public sources, sometimes enlarged by private sector funding when it concerns mitigation. Japan alone is currently responsible for 50% of the pledged fast start finance. This shows great commitment of Japan, but also the weakness of voluntary contributions. The lack of a distribution key might be problematic in the long run. Who will fill the gap if Japan single-handedly decides to contribute less in the future? Public revenue transfers are thus likely to be incapable of meeting the goal of generating USD 100 billion every year starting in 2020. New international funding mechanisms are necessary that need to be politically feasible, effective and economically efficient. Levies on international aviation and maritime transport could for example leverage up to 19 billion and 6 billion annually, respectively, and are an incentive to reduced greenhouse gas emissions. These international mechanisms are both effective and economically efficient. They are, however, politically hard to implement because opposition can be expected from a variety of countries including those with large transport sectors, distant countries with large tourism sectors and SIDS –which can only be reached by air and maritime transport. The levies are being discussed for years already, but are not nearing implementation

Second, the Copenhagen Accord calls for a balanced allocation between adaptation and mitigation. But so far only 22% of total climate finance has been disbursed to adaptation. This figure would be even lower if it was not for the early operationalisation of the LCDF (around 2002), the SPA (2004), the SCCF (around 2002). At least 25% of

the adaptation finance was already received before the Copenhagen Accord. Furthermore, and only 14% of the approved funding is allocated to adaptation (see Figure 3). According to the UNFCCC this percentage is on the increase, but it is still very little compared to the tens of billions US Dollar that are needed for adaptation in developing countries annually. From the perspective of climate finance as damage repayment for a problem caused by industrialized countries, it is even unacceptable. The next section will explain the challenges for financing adaptation.

Underlying complexity of financing adaptation

There are several reasons why financing adaptation is a difficult process. First, as is already elaborated on in the section ´Adaptation and Development´, there is the lack of a broadly accepted definition of adaptation and its relation to development. Second, this makes it hard to label an activity as adaptation and to express its successfulness in terms of costs and benefits as such. Unlike mitigation, where cost per ton of abated CO2 emissions is a useful proxy to measure the effectiveness of a measure, successful adaptation is usually hard to measure, report and verify. And it depends on climate change: climate events are needed to show that a dike construction was cost-effective or that measures to reduce agricultural losses under dry conditions reduce the impact on food security and economic development.

Third, many mitigation measures can be profitable, but making adaptation profitable is difficult. Investment costs in mitigation (e.g. energy efficiency) might be high, but the incremental costs can be negative when such a measure reduces the energy consumption. The biggest uncertainty here is how energy prices will change, but the measure's effectiveness is independent of how the climate changes. An additional benefit is that the potential of making profit can leverage private investments in mitigation. This is much more complex for adaptation: calculations of the costs and benefits of adaptation are based on uncertain projections of inter alia climate change, economic growth, and population growth. The calculations often fail to value a human life and ecosystems; and often involve a longer term perspective. Longer term perspectives are usually less attractive for private investments, especially when it concerns developing countries with risky business environments.

Finally, even if profitable adaptive measures can be identified, many vulnerable countries and especially the poorest and most marginal sectors of society therein lack access to private finance due to poor credit ratings, the risk of changing policies, currency risks, technology risks, and limited institutional financial capacity. All these factors contribute to a lack of absorptive capacity, which constrains high up-front investments in developing countries. It is thus unclear in which sectors and which countries the private sector could finance adaptation. Private sector pilot projects with specific adaptation aims need to be carried out and analyzed by independent researchers to get a better understanding of the potential of private sector finance in adaptation.

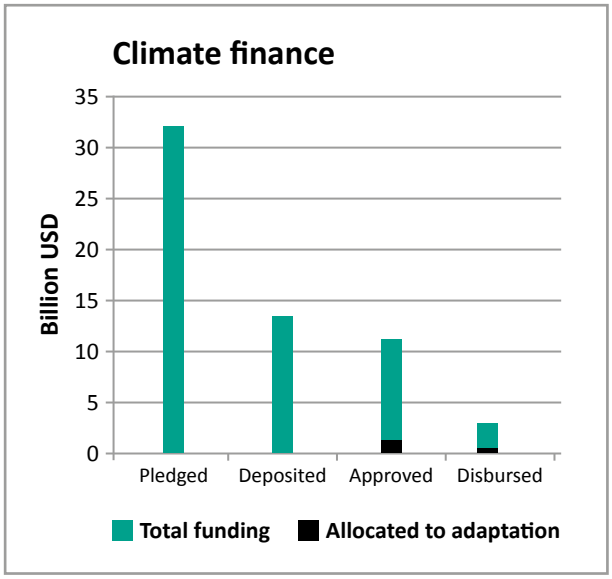

Figure 4. Pledged, deposited, approved and disbursed climate finance
Of the pledged and deposited funding it is unclear how much is allocated to adaptation. Source: www.climatefundsupdate.org, data from October 2011.

The earlier discussed institutionalisation of climate change adaptation at the local and national level would increase the absorptive capacity of developing countries, might open up profitable adaptation projects, and will give developing countries a stronger voice in international climate change negotiations. In this sense it is a good step that for example the African Development Bank is setting up the Green Africa Fund to receive, manage and deliver funds, specified towards Africa´s specific circumstances. Harmonization with other funds and easy accessibility are key for this fund to have an added value. Other countries such as Bangladesh, Indonesia, Guyana and Senegal are also setting up recipient funds to connect climate finance to broader and climate compatible development plans, both in terms of mitigation and adaptation.

Recommendations

To sum up, almost 32 billion climate finance has been pledged so far, but only 42% has been deposited, and only six per cent received. Adaptation finance from the private sector is scarce. It is unlikely that the public and private sector alone will mobilize the pledged annual USD 100 billion climate finance; and it is unlikely that they will disburse it in a transparent, country and sector inclusive, and predictable manner. Finance needs to be increased through innovative mechanisms including aviation and maritime transport levies.

Climate finance allocation to adaptation falls short. On a global scale mitigation is more important than adaptation, but on the local scale it is often the other way around. Based on the polluter pays principle, climate finance for adaptation needs prioritization in some cases. Therefore, the percentage of climate finance that goes to adaptation needs to be increased to at least 50%

Action needs to be taken to increase the accessibility to adaptation finance. Donors also have an important role here, for example by being more transparent on accessibility and expenditure, and by channeling significant financial resources through the Green Climate Fund. Recipients need to build capacity to adapt and to absorb climate finance. The establishment of recipient funds seems to be a step in the right direction. Where absorptive capacity remains low, the UNFCCC (specifically the Adaptation Committee –see next section) and donors should help build capacity to improve it.

IV. Opportunities for more effective institutionalization and financing of adaptation

As mentioned earlier the COP 16 in Cancun made major advancement regarding the institutionalisation of adaptation. It established the Cancun Adaptation Framework (CAF) as an overall framework to further advance action on adaptation, including institutional arrangements and processes. The CAF clearly emphasizes the need for further action on adaptation by spelling out a number of activities that parties should undertake in this regard. These include among others the planning and implementation of adaptation projects and programmes, assessments of vulnerability, adaptation and impacts of climate change, advancing climate related research and information, advancing capacity building and institutional building for adaptation and increasing the resilience of socio-economic and ecologic systems.

Regarding the institutional arrangements and processes an Adaptation Committee (AC) was established under the CAF to oversee and advance the action on adaptation. In addition, the CAF contains provisions to establish a process for LDC countries to develop and implement National Adaptation Plans (NAPs) geared towards their medium and long-term adaptation needs. As adaptation has to be tackled on various temporal scales, these NAPs serve as a helpful addition to the officially short-term oriented NAPAs.

While most modalities of these institutional arrangements still need to be fleshed out, they constitute important cornerstones for the more effective institutionalisation of adaptation and financing thereof. As shown in Figure 1, adaptation is currently addressed in different work programmes and under different bodies of the Convention. In addition, an increasing number of actors work on the topic outside the Convention. There is thus a high risk of duplication of efforts, fragmentation and the inefficient use of (financial) resources. One of the stated objectives of the AC is to promote "adaptation in a coherent manner under the Convention" If it succeeds in establishing close links between the other related institutions both under as well as outside the Convention, this could contribute considerably to reducing the above mentioned risks. If it fails, however, it would add to rather than reduce the overall level of fragmentation of adaptation, establishing yet another body on adaptation under the Convention.

There are currently various options discussed on how to improve linkages between the AC, relevant institutions under and outside the convention and the financial mechanisms on adaptation under the convention. These include fostering information exchange between the various institutions, holding joint meetings and consultations and providing guidance and advice to the respective bod-

ies. Improving the information flow is certainly a useful starting point, but the role of the AC should go further and include coordination of adaptation activities under the convention. This should be achieved by monitoring and assessing activities as a basis to provide recommendations for action under the COP and by giving advice on eligibility criteria and allocation mechanisms for adaptation finance. Developing evaluation methodologies for adaptation activities and improving access to knowledge are further potential instruments of the AC to ensure coordination and consistency between the various institutions.

In Cancún it was also decided to establish the Standing Committee (SC). The SC will assist the COP in exercising its climate finance functions, ranging from improving coherence and coordination to mobilization of financial resources and the measurement, reporting and verification of support provided to developing country Parties. These are all very important issues but how the Standing Committee will fulfill such a role is still an open question. So far this committee has however received little attention from donors, researchers and Parties. A decision on the role of the Standing Committee will probably be made during the COP17 in Durban. Whatever will be decided, it is important to clarify the relation between the SC and the AC to avoid duplication and fragmentation in adaptation finance.

Ultimately, the responsibility for the development and implementation of adaptation programmes and strategies rests with the respective countries. This is also reflected in the COP decisions on the AC, where explicit reference is made to a country-driven approach when implementing adaptation. The AC should thus focus on providing technical support and guidance during this process as it has no additional role in financing adaptation apart from this guidance function. Such technical support is urgently needed as many institutions particularly in developing countries are not yet adequately prepared for defining long-term adaptation needs and implementing adaptation on the ground, given the complexity and uncertainty of climate change impacts and the multitude of underlying drivers that contribute to vulnerability to climate change as well as pressing development needs. As adaptation is a cross-sectoral issue, close cooperation is needed between various institutions nationally but also between the national and the international level. In this regard, the CAF also calls for the establishment of regional centres to advance adaptation at this level and in order to function as a transmitter of information between international and national institutions. It will be one of the tasks of the AC to identify synergies and strengthen cooperation on various levels.

Taking into account the close link between adaptation and development, the AC could support the integration of adaptation into national and sectoral development strategies and programs at the country level by providing information and sharing best practices through its network function. Care needs to be taken that this does not result in a duplication of efforts with already existing capacity building activities. There is still a need for mainstreaming adaptation to climate change both within those sectors that will be affected by the impacts of climate change, and integration into cross-sectoral development strategies such as, for example, Poverty Reduction Strategy Papers (PRSP). This ensures that in the long run development objectives are not jeopardized by climate change.

The Green Climate Fund with its envisaged large volume and its broad approach has adaptation as one focus on its rather broad agenda. It remains to be seen to what extent the fund will distribute the annual USD 100 billion climate finance from developed countries starting in 2020, as donor countries might prefer to spend their funding mainly through bilateral channels, which guarantees them higher visibility and more direct influence on the use of the money. The involvement of the private sector, and private sector finance in particular, is also still under discussion. Another open issue is how to balance the allocation between mitigation and adaptation. As stated in the climate finance section, financing mitigation is often more attractive than financing adaptation from a donor perspective. Thus, the future of the fund and its usefulness for adaptation will depend on the foci to be set by the Transitional Committee that is working on its establishment; and the board later on.

Recommendations

The increasingly complex institutional arrangements for adaptation and the diversification of Parties, Groups, Committees, Non-State Actors etc harbors the risk of increasing fragmentation. The UNFCCC's Adaptation Committee holds potentials for reducing the fragmentation of institutions dealing with adaptation. We recommend a strong role for developing countries in the Adaptation Committee as successful and cost-effective adaptation is more difficult in developing countries than in developed countries. Furthermore, the Adaptation Committee should not reinvent the wheel, but rather make good use of existing knowledge and networks. Information sharing is of utmost importance to prevent duplication of work and fragmentation but instead stimulate integration and consolidation

V. Conclusion and outlook

Although improvements can be made, it is fair to state that adaptation has been institutionalized internationally. The national and local levels need to be equipped better to take on the climate change adaptation challenge. Financing of adaptation has also been institutionalized and financial resources for adaptation have increased in recent years. However, they still fall short and it is unclear how USD 100 billion of climate finance will be mobilized annually from 2020 onwards. We finish this policy paper with some conclusive recommendations for both institutionalizing and financing of adaptation.

- Development cooperation and climate finance share the goal of climate compatible social, environmental and economic development, but the current finance debate divides them. We recommend the improvement of a straightforward definition of climate finance and its relation to ODA. For example, do loans count? Does it count if an international company is climate proofing its local business? These definitions must be broadly accepted by donors and recipients alike. The OECD DAC markers can serve as a starting point, but its procedure of self-reporting by donors needs to be addressed to increase transparency. Funding for development and adaptation should be separated at the source, but not whilst spending. Broadly agreed definitions should be in place before 2020 when much larger sums of climate finance from public and private sources and innovative mechanisms are supposed to come into play.

- Almost 32 billion climate finance has been pledged so far. But currently only 42% has been deposited, only 6.1% received, and only 1.4% is spent on adaptation. This raises two important points. First, that the public and private sector are unlikely to mobilize USD 100 annually as pledged. Finance has to be increased through innovative mechanisms including levies on aviation and maritime transport. Second, mitigation is prioritized and this is indeed the most important challenge from a global perspective. But on the local scale adaptation is often more important. Based on the polluter pays principle, climate finance for adaptation often needs to be prioritized. Therefore, the percentage of climate finance going to adaptation needs to be increased to at least 50%.

- Improve accessibility of adaptation finance. The abundance of climate funds has not lead to large scale finance for adaptation, but does contribute to low transparency and accessibility, and high transaction costs. Funds outside the UNFCCC also seem to detract from the importance of funding under the convention. Donor countries should pursue the Green Climate Fund to channel significant amounts of climate finance and they should endorse developing country ownership in designing, financing and implementing adaptation activities. Recipient countries need to build capacity to adapt and to absorb climate finance at national and local level. Specific situations in different environments (political, social, economic, and environmental) require tailor-made and bottom-up adaptation practices. The NAPs offer opportunities for this. The establishment of national funding entities to manage climate finance and mainstream adaptation into national development plans seems to be a step in the right direction. Where absorptive capacity remains low, the UNFCCC (especially the Adaptation Committee) and donors should help to build capacity to improve it.

- The increasingly complex institutional arrangements for adaptation harbor the risk of increasing fragmentation. The Adaptation Committee holds potentials to limit fragmentation. We recommend a strong role for developing countries in the Adaptation Committee as their challenge to adapt is larger. Furthermore, the Adaptation Committee should not reinvent the wheel, but rather make good use of existing knowledge and networks. Information sharing is of utmost importance to prevent duplication of work and fragmentation but instead stimulate integration and consolidation.

Finally, a post-Kyoto agreement is crucial. While it is not the aim of this paper to write about mitigation, it should not be forgotten that failure to mitigate climate change will increase the burden of adaptation.

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